

Power Amplifier

6-18GHz/45dB Gain/37dBm Psat

Model: TLPA6G18G-40-37

TLPA6G18G-40-37 is a power amplifier with a typical small signal gain of 45 dB and a nominal Psat of 37 dBm across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +30 VDC/860 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 6-18GHz
- Gain: 45dB Typ
- Output Power Psat: 37dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	6		18	GHz
Small Signal Gain		45		dB
Output P1dB		33		dBm
Output Psat		37		dBm
Spurious		-60		dBc
Harmonic		-20		dBc
Input VSWR		2		:1
DC Voltage		30		V DC
DC Supply Current		860		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	60*100*12(Without heatsink) 100*200*56(With heatsink)	mm

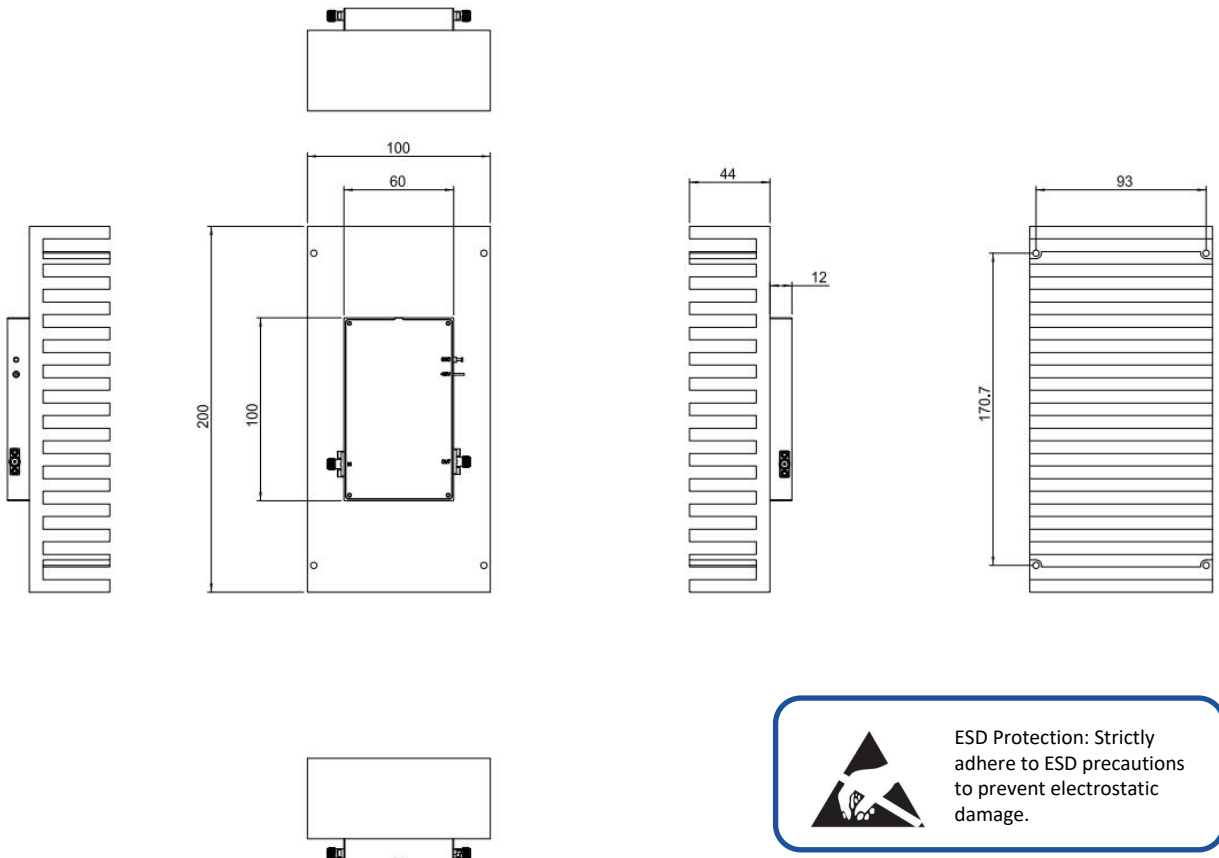
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+31 VDC
RF Input Power	+15 dBm
ESD sensitivity (HBM)	Class 0, passed 150V



Outline Drawing:

Unit:mm; Tolerance:±0.1mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

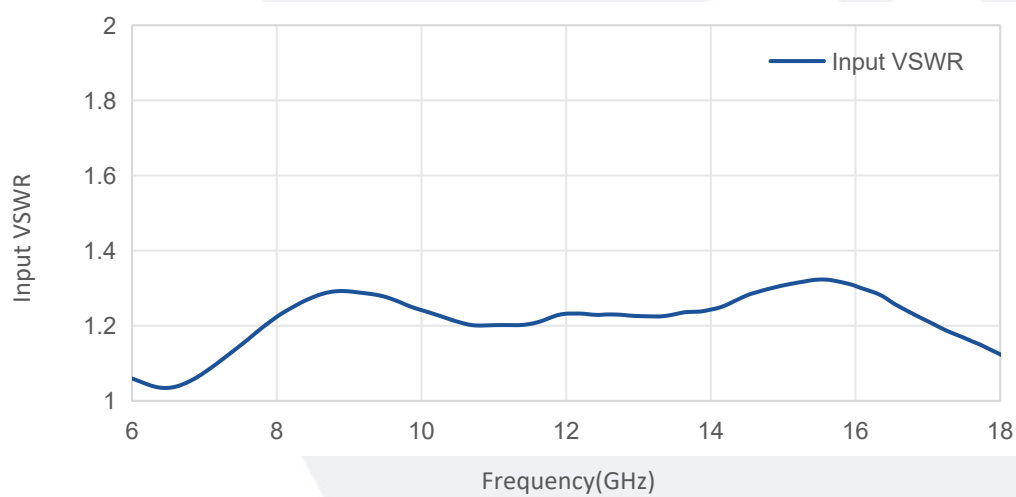
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA6G18G-40-37	Power amplifier 6-18GHz, Gain:45dB,Psat:37dBm,+30V DC,With Heatsink	Rev.1.0

Typical Performance Data:

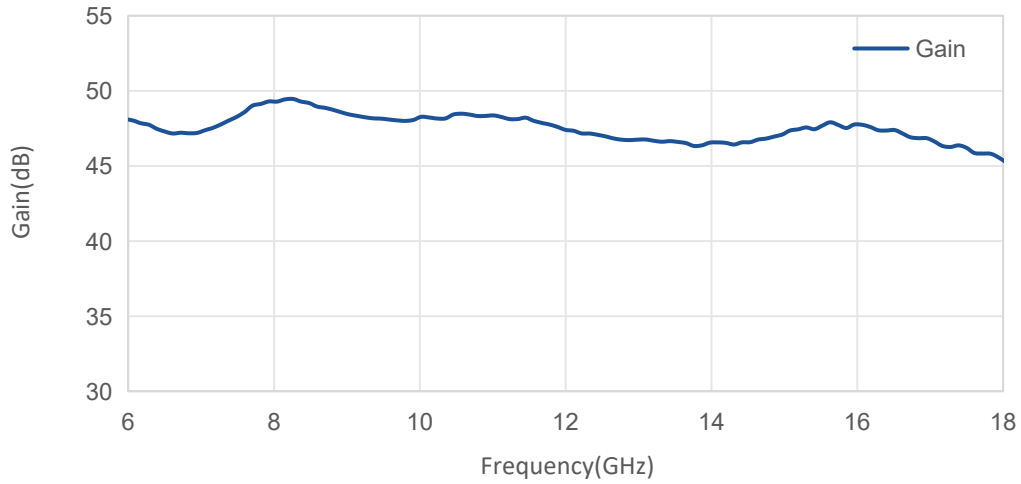
Input VSWR vs Frequency



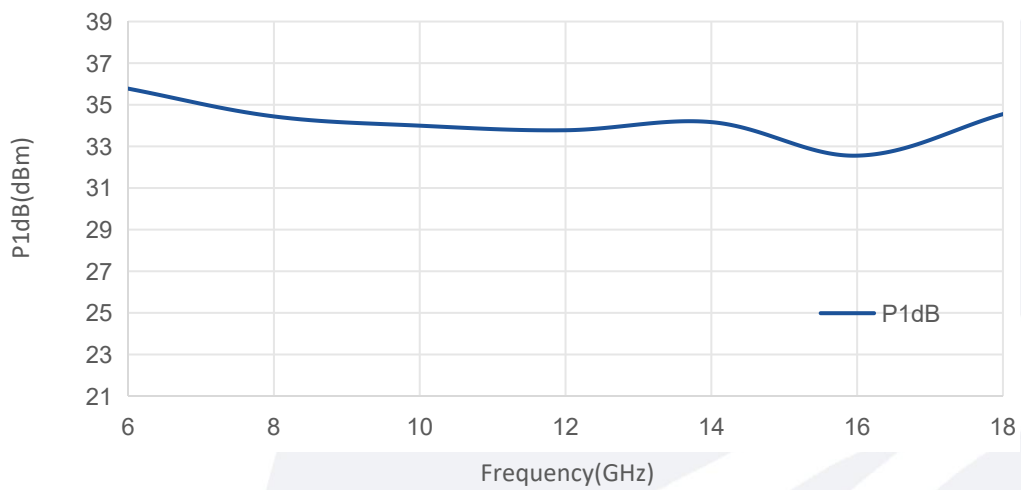
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

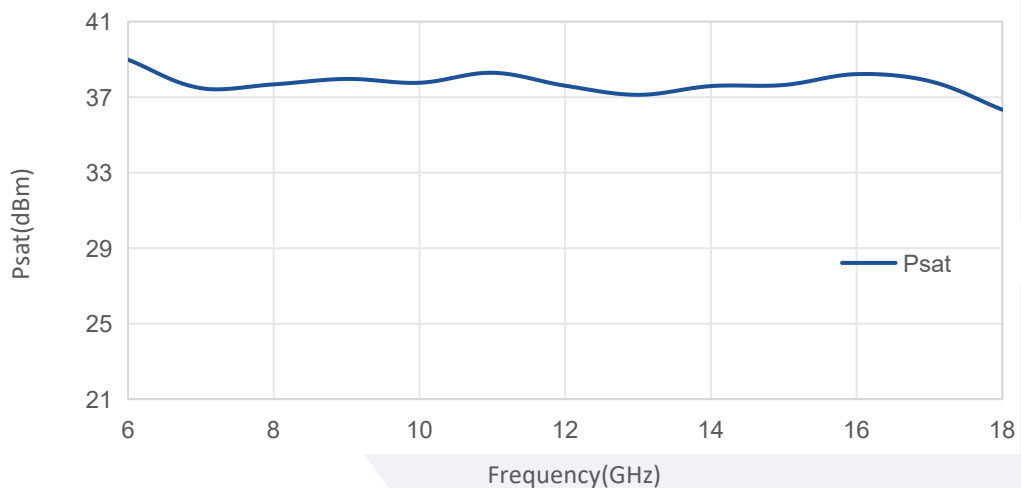
Small Signal Gain vs Frequency



P1dB vs Frequency



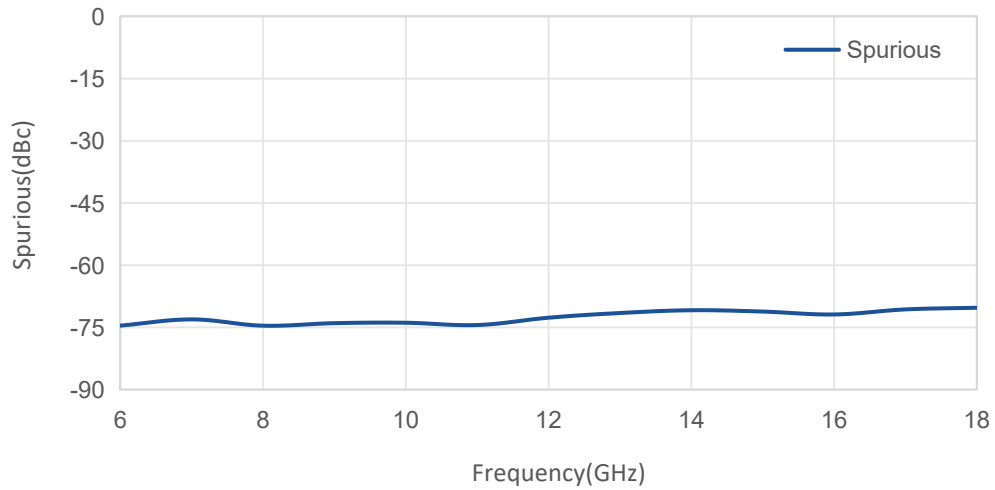
Psat vs Frequency



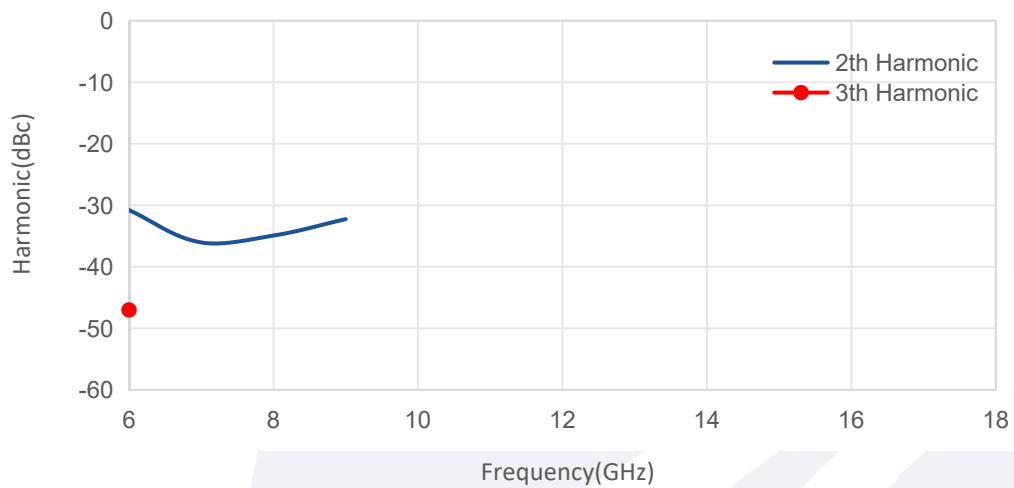
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Typical Performance Data:

Spurious vs Frequency



Harmonic vs Frequency



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